PLAYER PEG

The invention comprises an ice hockey or soccer player peg moved by hand.
There are two kinds of player pegs, which are moved along tracks or grooves: player pegs moved by hand and player pegs moved with the help of rods or steering wheels or wheels. The player pegs moved with the rods do not directly touch the game board surface; they are attached to a socket at the end of the rods, which sockets protrude from the grooves or openings below the game board surface. The player peg is attached to the socket which moves the player peg with it, when the rods normally protruding from the holes at the end of the game board are alternately pulled and pushed. The technique in which the player pegs are moved by rods or steering wheels does not have the same friction problems against which the technique in which the player pegs are moved by hand has to fight. The games in which the player pegs are moved by hand have a different track profile than the ones operated with the rods, in which one player peg always has a direct-line tract or groove. Hence, the player pegs can never meet another player peg in their own track. The player pegs travel a short distance from, and parallel to, each other from one end of the game board to the other end, either pulled or pushed by the rods. In practice, it would be impossible to operationally realise a traverse movement across the game board. But, this can be done when using the principle applied to the player pegs moved by hand. With no rod or steering wheel structures, the player pegs can travel freely in line with the track profile. The player pegs are not attached to a socket; instead, due to the their button-like bottom part, they stay in the groove. The bottom part is a button-like base, of the size adjusted to be somewhat smaller than the T-shaped track groove to enable unobstructed movement of the button. Out of the button, which is located below the game board surface, a shaft protrudes up to the game board. The player peg is attached to this shaft. The shaft is a little longer than the thickness of the groove wall to allow some leeway between the player peg and the game board surface for unobstructed movement of the player peg. Hence, in theory, the manual solution allows complete freedom to design the track profile. In these games, the track is uniform, this is, all player pegs use the same uniform track, which aims to cover the entire field area. A uniform track creates a miniature field network, which covers the entire game board. The form or shape of the miniature field network is determined by the profile or course of the uniform

track. For smooth movement of the player pegs from place to place along the groove, the groove or track should be as smooth as possible, this is, it should not have sharp curves. There has not been much development work on designing player pegs moved by hand. The player pegs have a centre shaft with a button-type widening at one end and the actual player peg at the other end. As the player peg travels in the groove of the game board, three negative things happen, which slow down and encumber the movement of the player peg. The front edge of the player peg is prone to get stuck onto the surface of the game board, when the player peg tilts. The same phenomenon takes place in the T-groove of the button as the button tilts when pushed forward in the groove. The third factor slowing down the game is when the shaft of the player peg runs into the groove edges of a curve, resulting in an annoying thump, with the player peg often stopping; this makes the game unpleasant.

These disadvantages are present in the two games known to the technique, which, as mentioned, use a manual technique. Indeed, the disadvantages are present in these two solutions for different reasons. The other one represents the US-A 2 398 726, 273-132, where the actual track groove profile is designed with consideration to the game tactics of making the movement of the player pegs as complex as possible. The track or groove contains as many sharp curves and obstacles as possible. The movement of the player pegs in a groove is slow creeping, looking for the most suitable route. The intention in creating this game was not to create a smooth forward-moving ice hockey game. Consequently, the player peg designed for the game is quite appropriate. As the speed is totally lacking in the game, the structure of the player peg is not designed in further detail. However, the case is quite different with the other manual solution known to the technique. With its track profile, the Finnish Utility Model, #U-20010032, which was converted into a patent, represents very fast-pace, smooth ice hockey. The game field consists of hexagonal miniature fields, which composition is technically joined to cover the entire game board, eliminating the obstacles, i.e., the sharp curves, which hinder the course of the game. In spite of the game field profile, due to the player pegs, the course of the game is more or less jerky.

Hence, the intention of the present invention is to create a new type of a player peg, which eliminates the above-mentioned problem.

This is achieved with an ice hockey or soccer player peg moved by hand according to the invention, c h a r a c t e r i z e d in that that a button is fastened to the eccentric shaft of the player peg to keep the player peg in its track groove. An even better results is achieved, if the player peg stands on a base or baseboard revolving around its own shaft, the diameter thereof preferably being wider than the actual player peg. In this solution, the button-like bottom part is fastened with a shaft eccentrically to a revolving baseboard. The movement of the player pegs can be made even smoother by fastening the button-like bottom end to the eccentric shaft with a motional technique, e.g., with a ball joint or cotter pin/loop technique. One end of the cotter pin is passed through the loop located on the button, joining the loop end of the cotter pin to the loop on the button. Hence, a moving joint is created, which makes it possible for the button to always remain in a horizontal position in its groove independent of the tilting of the player peg. Consequently, the blade can also be lifted effortlessly over the puck from one side to the other. As was already mentioned, it is preferable that the diameter of the base, with its shaft allowing rotational movement, is longer the player peg at least for two reasons. The larger surface area of the base does not get stuck to the game board as easily, and, secondly, the eccentric effect is the quicker the larger the deviation from the assumed centre shaft is. This quickness is seen, when the player peg runs into the corners of the track, whereupon, due to bumping, the base, eccentrically shafted in the groove, of the player peg revolving around its own shaft, swings from side to side independently, allowing the player peg to move relatively smoothly, making it easier to control the movement of the puck. If the player peg were not to have a revolving base or baseboard, the movement generated by the eccentric shaft would swing the entire player peg instead of the revolving baseboard. So, the revolving baseboard together with the eccentric shaft is a combination which enables a smoothly running ice hockey game. It is preferable that the surface area of the moving baseboard is larger than the bottom of the player peg yet for three reasons. The larger base acts as a buffer, thereby preventing the fingers from getting involved in the course of the game, for instance, when bumping into something. The eccentric shaft also contributes to preventing the base of the player peg from getting stuck to the game board surface. The button with the eccentric shaft always strives to settle in the wake of the player peg, leaving in its front a wide area of base surface, which effectively prevents the player peg from tilting and thereby also preventing it from getting stuck onto the game board. As mentioned above, thanks to the revolving player peg base,

as if dancing in the wake of the player peg, the eccentric shaft with the button moves from side to side, adapting to the track profile, at the same time allowing the player peg to move more directly. Technically, it would also be possible to solve the problem with the movement of the player pegs by installing a roller bearing to the bottom surface of the player peg. The roller bearing should be installed on the outer edge of the player peg bottom; this would entirely prevent the outer edge of the player peg from getting stuck to the game board. The solution is expensive and could create friction problems in the grooves. To improve the collision damping effect generated by the eccentric technique, the baseboard can be fastened to the player peg with a flexible shaft, such as a rubber band. One end of the rubber band is fastened to a loop on the baseboard and the other end to the top of the hollow interior of the player peg. This creates a solution, which not only makes the revolving movement but also the horizontal movement of the baseboard possible . In order to attain an even bigger damping effect, via an arm or tail, the button can be fastened to the eccentric shaft. In such a case, the arm has to be fastened above the player peg's bottom surface; this way, the solution does not slow down the advancement of the player peg. The fastening should be between the player peg bottom and the baseboard.

Below, the invention is explained, with references to the appended drawings, where
Fig. 1 shows the technique already known.
Fig. 2 shows, from the side, a cross section of the player peg in accordance with the invention.
Fig. 3 further shows a side view of the player peg with a different shaft solution.
Fig. 4 shows the solution with a hollow player peg.
Fig. 5 shows the solution with a roller bearing installed.
Fig. 6 shows Fig. 2 from a downward-slanting angle.
Fig. 7 shows a cross section of the T-shaped track groove of the player peg.
Fig. 8 shows the arm or tail solution from a downward angle.

Fig. 1 shows the known technique, in which the shaft (C) with the button (B) is fastened to the centre at the bottom of the actual player peg (A) to hold the player peg (A) in the track groove (T). The shaft (C) with the button (B) is fastened to the player peg (A) with a screw (G). The blade (X) is fastened to the lower part of the player peg (A).

Fig. 2 shows a solution in accordance with the invention, in which the actual player peg (A), to which a separate baseboard (E) is fastened with a shaft (D) of its own in a rotating manner, the diameter of the baseboard (E) being larger than the bottom of the player peg (A). An eccentric shaft (P), with a button (B) at its bottom end, either rotating independently on the eccentric shaft (P) or as one piece with the shaft (P), is fastened to one edge of the baseboard (E). The eccentric shaft (P) can be a solid part of the baseboard (E) or a rotating sleeve around its own shaft (Pa).

Fig. 3) shows the player peg (A), the baseboard (E), its shaft (D), and the eccentric shaft (P) with the button (B) fastened to the baseboard (E). The button is fastened with a loop (F) joint to the shaft (P) in a rotating manner. The cotter pin (G) is taken through the loop on the button (B), and the ends of the cotter pin (G) are folded against the baseboard (E). This allows the mobility, and maintains the horizontal position, of the button (B) even if the player peg (A) tilts.

Fig. 4 shows a player peg (A), where the baseboard (E) is fastened to the player peg (A), allowing rotational and horizontal movement. The flexible shaft (K), which is fastened to the loop (L) of the player peg (A) and to the loop (M) of the baseboard (E), makes this possible. The cavity (Y) made to the player peg (A) helps the player peg move horizontally.

Fig. 5 shows the solution with a ball bearing (N). The rotating balls (R) are placed in a full circle to the outer edge of the player peg (A) bottom.

Fig. 6 shows Fig. 2 in a slanting angle from below.

Fig. 7 shows a cross section of the T-groove (T) of the game board (S), in which, with the help of the button (B), the player peg (A) moves and stays.

Fig. 8 shows the arm (Va), which is either eccentrically (P) fastened to the bottom or baseboard (E) of the player peg (A) or to the centre shaft (D) at the bottom of the player peg (A). The figure also shows the button (B) with the shaft (Pa).

The invention is not limited to the above-mentioned examples; it can also vary within the framework allowed by the claims.